

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

THE TRUSTEES OF  
PURDUE UNIVERSITY,

Plaintiff,

v.

STMICROELECTRONICS  
INTERNATIONAL N.V. and  
STMICROELECTRONICS, INC.,

Defendants.

Civil Action No. 6:21-cv-00727-ADA

JURY TRIAL DEMAND

**SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff The Trustees of Purdue University (“Purdue” or “Plaintiff”) files this Second Amended Complaint for Patent Infringement against Defendants STMicroelectronics International N.V. and STMicroelectronics, Inc. (collectively, “Defendants”), and alleges as follows:

**I. PARTIES**

1. Purdue is a statutory body corporate created by and existing under Indiana law, charged by Indiana law with the responsibility for operating Purdue University. Purdue’s principal place of business is at 610 Purdue Mall, West Lafayette, Indiana 47907.

2. Founded in 1869, Purdue is a public land-grant research university under the 1862 Morrill Act that is consistently ranked among the top universities in the world. Purdue enrolls more than 40,000 students under the guidance of over 16,000 faculty and staff. On September 14, 2020, Purdue was named the [fifth most innovative school](#) in the United States by the U.S. News & World Report. Purdue’s professional and graduate programs include the well-ranked College of Engineering, Krannert School of Management, College of Education, and College of Pharmacy.

Purdue's esteemed School of Aeronautics and Astronautics within the College of Engineering has acquired the nickname "Cradle of Astronauts" for the [twenty-six astronauts](#) it has produced, including Neil Armstrong and Gus Grissom. Other notable Purdue alumni are Nobel Prize winners Edward Mills Purcell, Ben Roy Mottelson, and Akira Suzuki. Purdue has also produced twenty-four National Academy of Engineering members.

3. Purdue is the State of Indiana's primary driver for economic growth in science and technology. For example, Purdue spent over \$435 million on research during the 2019-2020 fiscal year, founded more than 80 technology startups, and raised more than \$96 million in venture capital funding. In both [2020 and 2021](#), Purdue ranked [6th globally](#) for receiving U.S. utility patents according to the National Academy of Inventors and Intellectual Property Owners Association's annual report. This distinction marks the eighth straight year that Purdue has ranked in the [top 20](#).

4. Purdue is an instrumentality of the State of Indiana, created and authorized by the Indiana General Assembly under Indiana Code §§ 21-23-2-1 *et seq.*, and thus enjoys sovereign immunity. *Kashani v. Purdue Univ.*, 813 F.2d 843, 845 (7th Cir. 1987); *Wasserman v. Purdue Univ.*, 431 F. Supp. 2d 911, 916 (N.D. Ind. 2006) ("[T]he Board of Trustees [of Purdue] is a political arm of the state which is immune to suit."); *Harris v. Trustees of Purdue Univ.*, No. 1:16-cv-00824-TWP-MPB, 2017 WL 529598, at \*2 (S.D. Ind. Feb. 8, 2017).

5. Purdue's participation in this proceeding is not consent to the power of any court sitting outside of this District. Purdue does not waive any attribute of sovereignty owing to the State of Indiana and Purdue's status as an arm of the same. Purdue does not waive immunity to *inter partes* review, *ex parte* reexamination, or other post-grant proceedings at the United States Patent and Trademark Office ("USPTO"). Purdue does not waive immunity to any non-

compulsory counterclaims, or to any other federal or state proceedings whatsoever, whether or not initiated by Defendants.

6. Defendant STMicroelectronics International N.V. (“ST-INTL”), a wholly-owned subsidiary of STMicroelectronics, N.V. (“STNV”),<sup>1</sup> is “a company incorporated under the laws of the Netherlands, having its registered offices at WTC Schiphol Airport, Schiphol boulevard 265, 1118 BH Luchthaven Schiphol, Amsterdam, The Netherlands, acting through its Swiss branch at 39, Chemin du Champ-des-Filles, CH-1228 Geneva – Plan-Les-Ouates, Switzerland.”<sup>2</sup>

7. ST-INTL (alone or through its subsidiaries and/or certain of STNV’s other wholly owned subsidiaries) makes, uses, sells, offers for sale, distributes, and imports silicon carbide (“SiC”) metal oxide semiconductor field effect transistors (“MOSFETs”), such as the products identified on ST-INTL’s website: <https://www.st.com/en/sic-devices/sic-mosfets.html>; all products and solutions marketed or distributed under any of the following part numbers: SCTH50N120-7, SCT10N120H, SCT110N120G3D2AG, SCT130N120G3D8AG, SCT140N75G3D8AG, SCT160N75G3D2AG, SCT200N120G3TPAG, SCTWA50N120-4, SCTWA50N120, SCTWA30N120, SCTWA20N120, SCTWA10N120, SCT50N120, SCT30N120, SCT30N120D2, SCT30N120H, SCT1000N170, SCT1000N170AG, SCT100N120G2D2AG, SCT100N65G2D2TAG, SCT10N120AG, SCT20N120, SCT10N120, SCT20N120AG, SCT20N120H, SCT20N170, SCT20N170AG, SCT250N65G2TPAG, SCT250N65G3TPAG, SCTF35N65G2, SCTH100N120G2TAG; SCTWA35N65G2VAG, SCTL35N65G2V, SCTH100N65G2-7AG, SCTH35N65G2V-7, SCTH35N65G2V-7AG,

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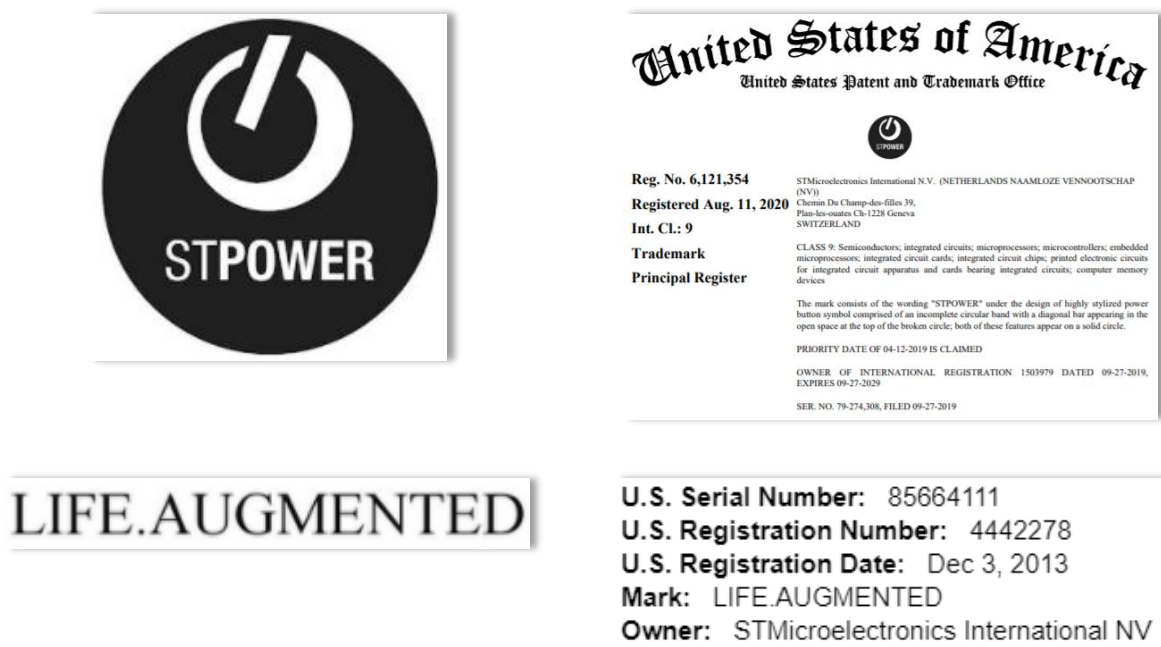
<sup>1</sup> *Liberty Patents, LLC v. Broadcom Inc.*, No. 6:20-cv-00970-ADA, (W.D. Tex.), ECF No. 60 (Rule 7.1(a) Disclosure Statement filed on December 23, 20) at 1.

<sup>2</sup> [https://www.st.com/content/st\\_com/en/common/terms-of-use.html](https://www.st.com/content/st_com/en/common/terms-of-use.html) (last accessed Oct. 11, 2022).

SCTH35N65G2V7SAG, SCTH35N65G2V7TAG, SCTH90N65G2V-7, SCTH70N120G2V-7, SCTH60N120G2-7, SCTH40N120G2V7AG, SCTH40N120G2V-7, SCTH40N65G3V7TAG, SCTH40N65G3VF, SCTH45N65G3V7TAG, SCTH60N120G2-7AG, SCTHS250N120G3AG, SCTHS250N65G2AG, SCTHS300N75G3AG, SCTHU100N65G2-AG, SCTHU35N65G2-AG, SCTW100N65G2, SCTW100N65G2AG, SCTW70N120G2V, SCTW35N65G2V, SCTW35N65G2VAG, SCTW90N65G2V, SCTWA35N65G2V, SCTWA90N65G2V, SCTWA90N65G2V-4, SCTWA70N120G2V-4, SCTWA60N12G2-4AG, SCTWA60N120G2AG, SCTWA60N120G2-4, SCTWA40N12G24AG, SCTWA40N120G2V, SCTWA40N120G2V-4, SCTWA35N65G2V4AG, SCTWA35N65G2V-4, SCTW60N120G2, SCTW60N120G2AG, SCTW40N120G2V, SCTW40N120G2VAG, SCTW100N120G2AG, SCTL90N65G2V, SCTYA200N65G2TAG, SCT011H75G3AG, SCT011HU75G3AG, SCT012T90G3AG, SCT014HU65G3AG, SCT014T65G3AG, SCT020H120G3AG, SCT020HU120G3AG, SCT040H65G3AG, SCT040H65G3SAG, SCT040HU65G3AG, SCT055H65G3SAG, SCT055HU65G3AG, SCT070H120G3AG, SCTWA40N120G2AG, SCT020T120G3AG, A2F12M12W2-F1, A2U12M12W2-F2, ADP280120W3, ADP61075W3, A2UGTI1-F, and A2UGTI2-F; and all SiC power MOSFETs marketed or distributed under the STPOWER name or mark by an STMicroelectronics entity at any time since March 3, 2009 (collectively, “STPOWER SiC MOSFETs”).

8. By design and on purpose, ST-INTL, its subsidiaries, and/or certain of STNV’s wholly owned subsidiaries, acting in consort, place STPOWER SiC MOSFETs into the stream of commerce throughout the United States via an established distribution channel.

9. ST-INTL admits that it owns the following trademarks, which are registered with the USPTO:<sup>3</sup>



10. Datasheets, [flyers](#), and other marketing materials for STPOWER SiC MOSFETs contain ST-INTL's registered trademarks.

11. By and through over 80 sales & marketing [offices and contacts](#) in 35 countries, including the office located at 8501 N. Mo-Pac Expressway, Suite 420, Austin, Texas 78757, ST-INTL (alone or through its subsidiaries and/or certain of STNV's other wholly owned subsidiaries) markets STPOWER SiC MOSFETs for use in high-power applications, including automotive and industrial applications.

12. ST-INTL (alone or through its subsidiaries and/or certain of STNV's other wholly owned subsidiaries) sells, offers for sale, and/or negotiates such offers for sale of STPOWER SiC MOSFETs to customers in the United States, including in the State of Texas.

<sup>3</sup> ECF No. 101 (ST-INTL Answer), ¶ 28.

13. ST-INTL (alone or through its subsidiaries and/or certain of STNV’s other wholly owned subsidiaries) sells and offers for sale STPOWER SiC MOSFETs to distributors in the United States, including Avnet (9233 Waterford Centre Blvd., Austin, TX 78758 and 12211 Technology Blvd., Austin, TX 78727), Future Electronics (8310-1 North Capitol of Texas Hwy, Austin, TX 78731), and Arrow (9233 Waterford Centre Blvd., Austin, TX 78758).

14. Defendant STMicroelectronics, Inc. (“ST-INC”), a wholly owned U.S.-based subsidiary of STNV, is a Delaware corporation with its principal place of business at 750 Canyon Drive, Suite 300, Coppell, Texas 75019.

15. ST-INC admits that it also has an office at 8501 N. Mo-Pac Expressway, Suite 420, Austin, Texas 78757.<sup>4</sup> As the July 2021 Company Presentation makes clear, this is a “Main Sales & Marketing” office, and it is one of fourteen such offices in the United States.<sup>5</sup>



<sup>4</sup> ECF No. 37 (ST-INC Answer), ¶ 43.

<sup>5</sup> [July 2021 Company Presentation](#) at 3.

16. ST-INC admits that it is and has been registered to do business in the State of Texas since August 4, 1983.<sup>6</sup>

17. ST-INC admits that it has transacted business in this District.<sup>7</sup>

18. ST-INC admits that it owns the following trademarks that are registered in the USPTO:<sup>8</sup>



**U.S. Application Serial No.** 85522548  
**U.S. Registration No.** 4764845  
**U.S. Registration Date:** June 30, 2015  
**Mark:** ST (Stylized/Design)  
**Owner:** STMicroelectronics, Inc.



**U.S. Serial Number:** 85130590  
**U.S. Registration Number:** 3973433  
**U.S. Registration Date:** Jun 7, 2011  
**Mark:** ST (Stylized/Design)  
**Owner:** STMicroelectronics, Inc.



**U.S. Serial Number:** 85008787  
**U.S. Registration Number:** 3968997  
**U.S. Registration Date:** May 31, 2011  
**Mark:** ST (Stylized/Design)  
**Owner:** STMicroelectronics, Inc.

**STMicroelectronics**

**U.S. Application Serial No.** 75982189  
**U.S. Registration No.** 2605445  
**U.S. Registration Date:** August 6, 2002  
**Mark:** STMICROELECTRONICS  
**Owner:** STMICROELECTRONICS, INC.

<sup>6</sup> ECF No. 37 (ST-INC Answer), ¶ 44.

<sup>7</sup> *Id.*, ¶ 45.

<sup>8</sup> *Id.*, ¶ 46.



U.S. Serial Number: 75389355  
U.S. Registration Number: 2356498  
U.S. Registration Date: Jun 13, 2000  
Mark: ST  
Owner: STMICROELECTRONICS, INC.

19. Datasheets, [flyers](#), and other marketing materials for STPOWER SiC MOSFETs contain ST-INC's registered trademarks.

20. ST-INC admits that it markets STPOWER SiC MOSFETs for use in high-power applications, including automotive and industrial applications.<sup>9</sup>

21. ST-INC admits that it sells and offers for sale STPOWER SiC MOSFETs to customers in the United States, including in the State of Texas.<sup>10</sup>

22. ST-INC (alone or through its subsidiaries) sells and offers for sale STPOWER SiC MOSFETs to distributors in the United States, including Avnet (9233 Waterford Centre Blvd., Austin, TX 78758 and 12211 Technology Blvd., Austin, TX 78727), Future Electronics (8310-1 North Capitol of Texas Hwy, Austin, TX 78731), and Arrow (9233 Waterford Centre Blvd., Austin, TX 78758).

## II. JURISDICTION

23. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the Patent Laws of the United States, 35 U.S.C. §§ 1 *et seq.*

24. This Court has personal jurisdiction over ST-INC because (a) it admits "that it is subject to personal jurisdiction in this Court for the purposes of Purdue's Complaint";<sup>11</sup> (b) it

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<sup>9</sup> *Id.*, ¶ 49.

<sup>10</sup> *Id.*, ¶¶ 50-55.

<sup>11</sup> *Id.*, ¶ 61.



waived its right to challenge personal jurisdiction by failing to raise a lack of personal jurisdiction defense in its Answer; and because, directly or through intermediaries, (c) it has committed acts within the District giving rise to this action and/or has established minimum contacts with the District such that the exercise of jurisdiction comports with due process.

25. This Court has personal jurisdiction over ST-INTL because (a) it has appeared in this action and assented to this Court's jurisdiction, (b) it waived its right to challenge personal jurisdiction by failing to raise a lack of personal jurisdiction defense in its Answer;<sup>12</sup> and because, directly or through intermediaries, (c) it has committed acts within the District giving rise to this action and/or has established minimum contacts with the District such that the exercise of jurisdiction comports with due process.

26. This Court also has personal jurisdiction over ST-INTL, under Federal Rule of Civil Procedure 4(k)(2), because (i) Purdue sues ST-INTL for patent infringement pursuant to 35 U.S.C. § 271, (ii) ST-INTL is a foreign corporation not subject to jurisdiction in any state's courts of general jurisdiction, and (iii) the exercise of personal jurisdiction over ST-INTL satisfies due process.

27. ST-INTL, directly and/or through subsidiaries and agents (including distributors, retailers, and others) makes, imports, ships, distributes, offers for sale, sells, uses, and advertises (including offering products and services through its website, <https://www.st.com>, as well as retailers) STPOWER SiC MOSFETs in the United States, the State of Texas, and the Western District of Texas, including ST-INC, a company operating and transacting business in Texas.

28. ST-INTL, directly and/or through its subsidiaries and agents (including distributors, retailers, and others), has purposefully and voluntarily placed STPOWER SiC

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<sup>12</sup> See ECF No. 101 (ST-INTL Answer).

MOSFETs into the stream of commerce throughout the United States with the expectation that the products will be purchased and used by customers in this District. STPOWER SiC MOSFETs have been and continue to be purchased and used by customers in this District. ST-INTL has committed acts of patent infringement within the State of Texas and, more particularly, within this District.

29. This Court's exercise of personal jurisdiction over ST-INTL is thus consistent with the Texas long-arm statute, TEX. CIV. PRAC. & REM. CODE § 17.042, and traditional notions of fair play and substantial justice.

30. ST-INTL is also subject to this Court's specific personal jurisdiction, because the present dispute arises from, and is related to, ST-INTL's activities in Texas and in this District, as described above, such as soliciting business from and transacting business with others in the State of Texas in this District.

### III. VENUE

31. Venue is proper in this District under 28 U.S.C. § 1400(b) as to ST-INC because (a) it admits venue over it is proper in this District;<sup>13</sup> (b) it resides in Texas given it is registered to do business in Texas; and (c) it has a regular and established place of business in this District at 8501 N. Mo-Pac Expressway, Suite 420, Austin, Texas 78757 and has committed acts of infringement here by, among other things, importing, offering to sell, and selling products that infringe the '633 Patent.

32. Venue is also proper in this District as to ST-INTL under 28 U.S.C. § 1391(c)(3) because ST-INTL is organized under the laws of The Netherlands and not a resident of the United States and may, therefore, be sued in any judicial district. Further, ST-INTL has waived any objection it had to venue by failing to raise it in its Answer and through its litigation conduct. *See*

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<sup>13</sup> *See* ECF No. 37 (ST-INC Answer), ¶ 69.

*United States v. Ziegler Bolt & Parts Co.*, 111 F.3d 878, 882 (Fed. Cir. 1997) (“A defendant may waive such affirmative defenses by actively litigating the suit, even where the defenses are properly included in the defendant’s answer.”); *Koninklijke Philips N.V. v. ASUSTek Comput. Inc.*, No. 1:15-cv-1125-GMS, 2017 WL 3055517, at \*3 (D. Del. July 19, 2017) (finding that defendants’ conduct waived any venue defense where they “(1) participated in a scheduling conference; (2) conducted discovery; (3) entered into a stipulation and protective order with the plaintiff; and (4) moved the court to allow their out of state counsel to appear *pro hac vice*”).

33. Purdue does not waive its sovereign immunity as to any venue, including district courts and administrative tribunals, other than this Court, namely the United States District Court for the Western District of Texas, Waco Division.

#### **IV. U.S. PATENT NO. 7,498,633**

34. On March 3, 2009, U.S. Patent No. 7,498,633 (“’633 Patent”), entitled “High-Voltage Power Semiconductor Device,” was duly and legally issued by the USPTO. A true and correct copy of the [’633 Patent](#) is attached as Exhibit A to Plaintiff’s Complaint for Patent Infringement and Jury Demand (ECF No. 1) and is incorporated herein by reference.

35. The ’633 Patent issued from U.S. Patent Application No. 11/338,007, which was filed on January 23, 2006, and claims priority to U.S. Provisional Application No. 60/646,152, which was filed on January 21, 2005.

36. The ’633 Patent relates generally to semiconductor devices, and more particularly to useful, novel, and non-obvious semiconductor devices for high-voltage power applications.

37. Claim 9 of the ’633 Patent reads:

A double-implanted metal-oxide semiconductor field-effect transistor comprising:

a silicon-carbide substrate;

a drift semiconductor layer formed on a front side of the semiconductor substrate;

a first source region;

a first source electrode formed over the first source region, the first source electrode defining a longitudinal axis;

a plurality of first base contact regions defined in the first source region, each of the plurality of first base contact regions being spaced apart from each other in a direction parallel to the longitudinal axis defined by the first source electrode;

a second source region;

a second source electrode formed over the second source region, the second source electrode defining a longitudinal axis;

a plurality of second base contact regions defined in the second source region, each of the plurality of second base contact regions being spaced apart from each other in a direction parallel to the longitudinal axis defined by the second source electrode; and

a JFET region defined between the first source region and the second source region, the JFET region having a width less than about three micrometers.

38. Claim 10 of the '633 Patent depends from claim 9 and reads:

The double-implanted metal-oxide semiconductor field-effect transistor of claim 9, wherein the JFET region has a width of about one micrometer.

39. The inventors of the '633 Patent are James A. Cooper, Ph.D. and Asmita Saha, Ph.D.

40. Dr. Cooper is a Jai N. Gupta Professor Emeritus of Electrical and Computer Engineering at Purdue and received his Ph.D. from Purdue in 1973. From 1973 to 1983, Dr. Cooper was a member of Technical Staff with Bell Laboratories, Murray Hill, NJ, where he was a Principal Designer of AT&T's first CMOS microprocessor and developed a time-of-flight technique for investigating high-field transport in silicon inversion layers. He joined the Purdue faculty in 1983, where he was the Founding Director of the Purdue Optoelectronics Research Center. Since 1990,

Dr. Cooper has explored device technology in the wide bandgap semiconductor SiC. His group demonstrated the first monolithic integrated circuits in SiC (1993), the first planar DMOS power transistors (1996), the first lateral DMOSFETs (1997), the first self-aligned short-channel DMOSFETs (2003), and a variety of other devices.

41. Dr. Saha was Dr. Cooper's student and, under his guidance, earned her doctorate from Purdue's School of Electrical and Computer Engineering, Birck Nanotechnology Center. Her thesis focused on optimized design and simulation and fabrication of 4H-SiC short-channel DMOSFETs.

42. Purdue is the owner of all rights, title, and interest in and to the '633 Patent with full right to enforce the '633 Patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. On May 2, 2006, as recorded with the USPTO on May 18, 2006, Drs. Cooper and Saha assigned their rights and interests in the '633 Patent to Purdue Research Foundation. Thereafter, Purdue Research Foundation assigned its rights and interest in the '633 Patent to Purdue on June 18, 2021, as [recorded](#) with the USPTO on June 21, 2021.

43. Every claim of the '633 Patent is valid and enforceable and enjoys a statutory presumption of validity pursuant to 35 U.S.C. § 282.

44. All requirements under 35 U.S.C. § 287 have been satisfied with respect to the '633 Patent.


45. Defendants have never, either expressly or impliedly, been licensed under the '633 Patent.

## **V. INFRINGEMENT OF THE '633 PATENT**

46. Defendants have been and continue to directly, indirectly (by inducement), and willfully infringe at least claims 9 and 10 of the '633 Patent in violation of 35 U.S.C. § 271.

47. At one or more times during the period March 3, 2009 to the present, Defendants have and continue to directly infringe the '633 Patent, literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing in or into the United States STPOWER SiC MOSFETs, without authority, in violation of 35 U.S.C. § 271(a).

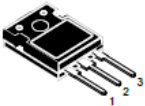
48. Defendants admit that STPOWER SiC MOSFETs (such as SCTW90N65G2V) are or include a MOSFET.



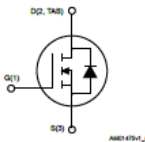
SCTW90N65G2V

Datasheet

Silicon carbide Power MOSFET 650 V, 119 A, 18 mΩ (typ., T<sub>J</sub> = 25 °C) in an HiP247 package



HiP247



AM014754T\_02/20

Features

Order code	V <sub>DS</sub>	R <sub>DS(on)</sub> max.	I <sub>D</sub>
SCTW90N65G2V	650 V	24 mΩ	119 A


- Very high operating junction temperature capability (T<sub>J</sub> = 200 °C)
- Very fast and robust intrinsic body diode
- Extremely low gate charge and input capacitances

Applications

- Switching applications
- Power supply for renewable energy systems
- High frequency DC-DC converters

Description

This silicon carbide Power MOSFET device has been developed using ST's advanced and innovative 2<sup>nd</sup> generation SiC MOSFET technology. The device features remarkably low on-resistance per unit area and very good switching performance. The variation of switching loss is almost independent of junction temperature.



Product status link

SCTW90N65G2V

Product summary

Order code	SCTW90N65G2V
Marking	SCT90N65G2V
Package	HiP247
Packaging	Tube

DS19832 - Rev 5 - July 2019

For further information contact your local STMicroelectronics sales office.

www.st.com

49. On information and belief, each STPOWER SiC MOSFET is double-implanted.

50. On information and belief, each STPOWER SiC MOSFET includes a SiC substrate.



**SiC MOSFET**

The real breakthrough in high-voltage switching

**Silicon Carbide: The Enabling Technology for higher power density in Industrial and Automotive application**

Based on the advanced and innovative properties of wide bandgap materials, ST's silicon carbide (SiC) MOSFETs feature very low  $R_{DS(on)}$  per area, with the new SCT\*N65G2 650 V product family and the SCT\*N120G2 1200 V product family in development, combined with excellent switching performance, reserve efficient and compact designs. These new families feature the industry's highest temperature rating of 200 °C for improved thermal design of power electronics systems.

KEY FEATURES	KEY APPLICATIONS
• Very low switching losses	• Traction inverter
• Low power losses at high temperatures	• EV charge station
• Higher operating temperature (up to 200 °C)	• Photovoltaics
• Body diode with no recovery losses	• Factory automation
• Easy to drive	• Motor drive
	• Data center power supply
	• OBC & DC/DC converter

**KEY BENEFITS**

- Smaller form factor and higher power density
- Reduced size/cost of passive components
- Higher system efficiency
- Reduced cooling requirements and heatsink size

www.st.com

51. On information and belief, each STPOWER SiC MOSFET includes a drift semiconductor layer formed on the front side of the substrate, a first source region, a first source electrode formed over the first source region defining a longitudinal axis, and a plurality of first base contact regions defined in the first source region, each of which is spaced apart from the others in a direction parallel to the longitudinal axis defined by the first source electrode.

52. On information and belief, each STPOWER SiC MOSFET also includes a second source region, a second source electrode formed over the second source region defining a

longitudinal axis, and a plurality of second base contact regions defined in the second source region, each of which is spaced apart from the others in a direction parallel to the longitudinal axis defined by the second source electrode.

53. On information and belief, each STPOWER SiC MOSFET also includes a JFET region, with a width less than about three micrometers, defined between the first source region and the second source region.

54. On information and belief, the JFET region of certain STPOWER SiC MOSFETs has a width of about one micrometer.

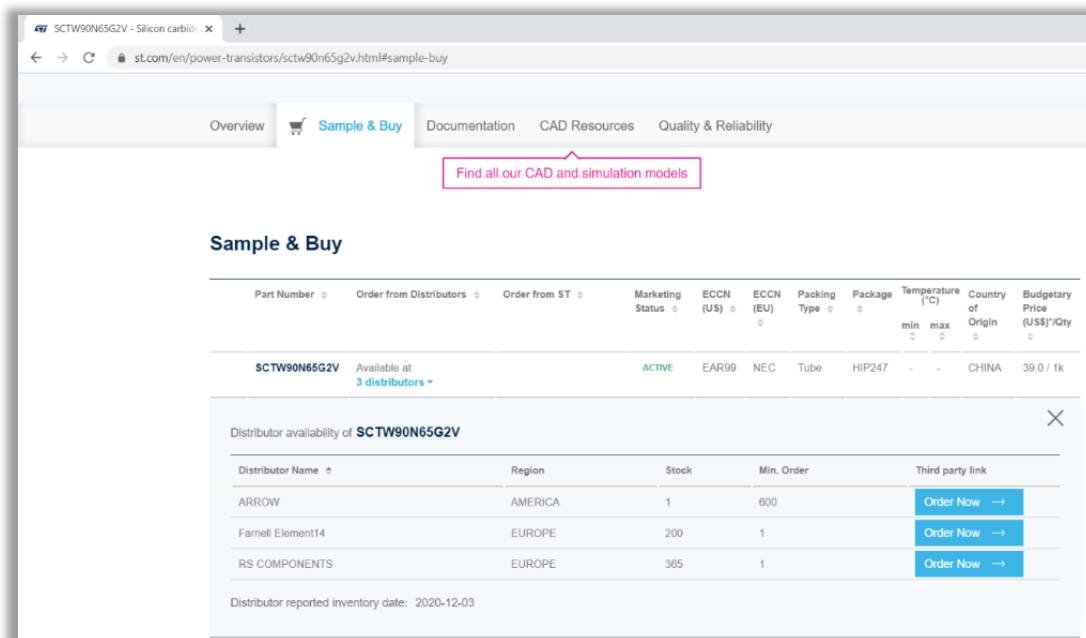
55. Purdue adopts, and incorporates by reference, as if fully stated herein, Purdue's claim chart filed at ECF No. 27-1 and Purdue's infringement contentions served in this case, including any supplements and amendments thereto, which describe and demonstrate how Defendants infringe at least claims 9 and 10 of the '633 Patent.

56. Defendants have and continue to indirectly infringe the '633 Patent by actively inducing direct infringement of the '633 Patent by others (such as customers, end users, distributors, resellers, and suppliers e.g., Digi Key, Mouser Electronics, and Future Electronics) by directing, contracting with, supporting, and/or otherwise encouraging the use, sale, offer for sale, and/or importation of STPOWER SiC MOSFETs in the United States, including the State of Texas and this District, in violation of 35 U.S.C. § 271(b).<sup>14</sup>

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<sup>14</sup> <https://www.st.com/en/power-transistors/sctw90n65g2v.html#sample-buy>; <https://www.arrow.com/en/support/contact-support/find-an-arrow-office?country=US> Offices; [https://www.st.com/content/st\\_com/en/contact-us.html](https://www.st.com/content/st_com/en/contact-us.html) (listing even distributor locations); (last accessed October 11, 2022).





57. Defendants were and have been aware of the '633 Patent and its coverage of STPOWER SiC MOSFETs since at least April 2021, when Purdue sent Defendants a notice letter, and no later than service of Plaintiff's Complaint for Patent Infringement and Jury Demand (ECF No. 1), and was aware that its actions as to importers, distributors, resellers, wholesalers, retailers, and/or end-users of STPOWER SiC MOSFETs would induce infringement. For example, Defendants knowingly and intentionally instruct their customers, distributors, end-users, and/or other third-parties to infringe the '633 Patent at least through applications engineering support, user manuals, product documentation, services, and other materials, such as those located on the company website at [https://www.st.com/content/st\\_com/en/products/sic-devices/sic-mosfets.html](https://www.st.com/content/st_com/en/products/sic-devices/sic-mosfets.html) and other websites such as at <https://www.youtube.com/watch?v=hV5mqmuozlA>. By providing instruction and training to customers and end-users on how to use STPOWER SiC MOSFETs, to promote the sales of these products, in a manner that directly infringes one or more claims of the '633 Patent, including at least claim 9, Defendants specifically intended to induce infringement of the '633 Patent.

58. Despite such awareness of the '633 Patent and its coverage of STPOWER SiC MOSFETs, Defendants continue to take active steps (*e.g.*, creating and disseminating STPOWER SiC MOSFETs and other SiC power MOSFETs with similar infringing technology, as well as product manuals, instructions, promotional and marketing materials, and/or technical materials to distributors, resellers, wholesalers, retailers, and end-users) by encouraging others to infringe the '633 Patent with the specific intent to induce such infringement. Accordingly, Defendants have known and intended that their products infringe the '633 Patent and that Defendants' continued actions would actively induce the infringement of the '633 Patent claims.

59. Defendants have continued making, using, offering for sale, selling, and importing STPOWER SiC MOSFETs despite an objectively high likelihood that their actions infringe claim 9 of the '633 Patent—a valid and enforceable patent, and such objective risk of infringement was known to Defendants or so obvious that Defendants should have known it. Therefore, Purdue is entitled to receive enhanced damages up to three times the amount of actual damages for Defendants' willful infringement pursuant to 35 U.S.C. § 284.

60. Defendants' direct, indirect, and willful infringement of the '633 Patent has caused, and will continue to cause, substantial damage to Purdue. Purdue is, therefore, entitled to an award of damages adequate to compensate for Defendants' infringement of the '633 Patent, but in no event less than a reasonable royalty for Defendants' use and/or sale of Purdue's invention, together with pre- and post-judgment interest, attorneys' fees, and costs as fixed by the Court under 35 U.S.C. §§ 284 and 285.

## **VI. JURY DEMAND**

Pursuant to Federal Rule of Civil Procedure 38(b), Purdue hereby demands a trial by jury on all issues so triable.

## **VII. PRAYER FOR RELIEF**

WHEREFORE, PREMISES CONSIDERED, Purdue requests that this Court enter judgment in its favor and against Defendants STMicroelectronics International N.V. and STMicroelectronics, Inc. as follows:

A. Adjudging, finding, and declaring that Defendants have infringed the '633 Patent under 35 U.S.C. § 271;

B. Awarding past and future damages arising out of Defendants' infringement of the '633 Patent to Purdue in an amount no less than a reasonable royalty, together with prejudgment and post-judgment interest, in an amount according to proof;

C. Adjudging, finding, and declaring that Defendants' infringement is willful and awarding enhanced damages and fees as a result of that willfulness under 35 U.S.C. § 284;

D. Adjudging, finding, and declaring that the '633 Patent is valid and enforceable;

E. Awarding attorney's fees, costs, or other damages pursuant to 35 U.S.C. §§ 284 or 285 or as otherwise permitted by law; and

F. Granting Purdue such other further relief as is just and proper, or as the Court deems appropriate.

Dated: October 13, 2022

Respectfully submitted,

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***COUNSEL FOR PLAINTIFF  
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**CERTIFICATE OF SERVICE**

In accordance with Federal Rule of Civil Procedure 5 and Local Rule CV-5, I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document through the Court's CM/ECF system on October 13, 2022.

/s/ Halima Shukri Ndai